

1.0 INTRODUCTION

This "Los Alamos National Laboratory Technical Area 55 Part B Permit Application" is submitted to address the requirements of the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1 NMAC), revised June 14, 2000 [6-14-00], specific to hazardous and mixed waste operations at Los Alamos National Laboratory (LANL) Technical Area (TA) 55. Additional information is provided in this permit application beyond that necessary for regulatory compliance to demonstrate how LANL meets regulatory standards. This information is not intended for inclusion in LANL's hazardous waste permit. Waste management units to be permitted include seven container storage units (CSU), a storage tank system, and one Subpart X treatment unit (a cementation unit). This document serves as Revision 2.0 to "Technical Area 55 Part B Permit Application," Revisions 0.0 and 1.0, submitted to the New Mexico Environment Department (NMED) in June 1996 and January 2002, respectively.

This document has been formatted to meet the permitting strategy outlined by the NMED Hazardous and Radioactive Materials Bureau (HRMB) in correspondence dated February 5, 1998 (NMED, 1998a). As presented in the 1998 correspondence, TA-specific permit applications, permit modification requests, and permit renewal applications would include any details and/or requirements not addressed in the "Los Alamos National Laboratory General Part B Permit Application." The most recent version of that document, hereinafter referred to as the LANL General Part B, complements this permit application. Certain portions of the LANL General Part B will serve in the operating permit as an "umbrella" document, covering the requirements of the New Mexico Hazardous Waste Act and implementing regulations, specifically 20.4.1 NMAC [6-14-00], common to all waste management units. Together, information provided in this permit application and in the LANL General Part B will meet the applicable requirements specified in 20.4.1 NMAC, Subparts V and IX [6-14-00].

This revised document also addresses the following:

- Revisions agreed upon in the "Response to Notice of Deficiency; TA-55 Part B RCRA Permit Application, January 2002, Revision 1.0, May 16, 2002," LA-UR-02-5041 (LANL, 2002a).
- Permitting requirements for a modification to the existing storage tank system. The two storage tank systems identified in Revision 0.0 of the TA-55 Permit Application as the evaporator glovebox storage tank system and the cementation unit storage tank system have been combined and modified into a single storage tank system. The storage tank system, as presented in this document, is comprised of two existing components and one new component. The two existing components include the evaporator glovebox tank component (formerly identified as the evaporator glovebox storage tank system) and the cementation unit pencil tanks component (formerly identified as the cementation unit storage tank system). The one new component includes additional pencil tanks.

- Permitting requirements for a new CSU to be located at TA-55-185.

In accordance with HRMB's 1998 permitting strategy, LANL submitted the "Los Alamos National Laboratory General Part A Permit Application." The most recent version of this document, hereinafter referred to as the LANL General Part A, consolidates information from previous site-wide and TA-specific Part A submittals into one comprehensive document, identifying all hazardous and mixed waste treatment, storage, and disposal facilities at LANL subject to 20.4.1 NMAC, Subparts V, VI, and IX [6-14-00] at that time. The LANL General Part A serves as a companion document to the LANL General Part B and TA-specific permit applications, permit modification requests, and permit renewal applications, including this revised permit application.

In the LANL General Part A, the LANL General Part B, and this revised permit application, a unit to be permitted may sometimes be referred to as a facility. The term "facility," as it appears in this context, is used only to denote building or area names and does not imply the regulatory meaning of "facility" as defined in 20.4.1 NMAC §260.1 [6-14-00]. However, pursuant to 20.4.1 NMAC §260.1 [6-14-00], the "LANL facility" as a whole does meet the regulatory definition of a facility.

Table 1-1 provides a list of regulatory references and the corresponding location in this permit application, as appropriate. Where applicable, regulatory citations in this document reference 20.4.1 NMAC, which adopts, with a few exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 to 266, Part 268, and Part 270.

Table 1-1
Regulatory References and Corresponding Permit Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Permit Application
§270.14(b)(1)	General facility description	Attachment A
§270.14(b)(2)	Chemical and physical analyses of hazardous waste	Attachment B ^a
§270.14(b)(3)	Waste analysis plan	Attachment B ^a
§264.13(b)	Development and implementation of a written waste analysis plan	Attachment B ^a
§264.13(c)	Off-site waste analysis requirements	Attachment B ^a
§270.14(b)(4)	Security procedures and equipment	Attachment J
§264.14	Security procedures and equipment	Attachment J
§270.14(b)(5)	General inspection schedule	Attachment C ^a
§264.15(b)	General inspection schedule	Attachment C ^a
§264.174	Inspections/containers	Attachment C ^a
§264.193(i)	Tank system inspections pending provision of adequate secondary containment	NA
§264.195	Overfill control inspections	Attachments C ^a , H, and I
§264.226	Surface impoundment monitoring and inspection	NA
§264.254	Waste pile monitoring and inspection	NA
§264.273	Land treatment and operating requirements	NA
§264.303	Landfill monitoring and inspection	NA
§264.602	Miscellaneous units	Attachment I
§264.1033	Process vent standards	Attachments H and I
§264.1052	Equipment leak air emission standards	Attachments H and I
§264.1053	Compressor standards	NA

See footnotes at end of table.

Table 1-1 (continued)
Regulatory References and Corresponding Permit Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Permit Application
§264.1058	Standards for pumps, valves, pressure relief devices, flanges, and connections	Attachments H and I
§270.14(b)(6)	Request for waiver from preparedness and prevention requirements of 264 Subpart C	NA
§264.30-37	Preparedness and prevention: applicability, design and operation, required equipment, testing and maintenance of equipment, access to communications or alarm systems, required aisle space, and arrangements with local authorities	NA
§264.227	Surface impoundment emergency repairs	NA
§270.14(b)(7)	Contingency Plan	Attachment E ^a
§264.50-56	Contingency plan and emergency procedures: applicability, purpose/implementation of contingency plan, content of contingency plan, copies of contingency plan, amendment to contingency, emergency coordinator, and emergency procedures	Attachment E ^a
§270.14(b)(8)	Description of preparedness and prevention	Attachment J
§270.14(b)(8)(i)	Hazard prevention in unloading operations	Attachment J
§270.14(b)(8)(ii)	Runoff prevention	Attachment J
§270.14(b)(8)(iii)	Contamination prevention of water supplies	Attachment J
§270.14(b)(8)(iv)	Mitigation of equipment failure and power outages	Attachment J
§270.14(b)(8)(v)	Prevention of undue exposure of personnel to hazardous waste	Attachment J
§270.14(b)(8)(vi)	Prevention of releases to the atmosphere	Attachment J
§270.14(b)(9)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Attachments G, H and I
§264.17	Procedures to prevent accidental ignition, reaction of ignitables, reaction of reactives, reaction of incompatibles, and documentation of compliance with 264.17 (general requirements for ignitable, reactive, or incompatible wastes)	Attachments G, H and I

Table 1-1 (continued)
Regulatory References and Corresponding Permit Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Permit Application
§270.14(b)(10)	Traffic pattern: volume, controls, and access	Attachment A
264.18(a)	Seismic considerations	
§270.14(b)(11)	Facility/unit identification and location information	Attachment A
§270.14(b)(11)(i)	Seismic standard applicability [264.18(a)]	Attachment A
§270.14(b)(11)(ii)	Seismic standard requirements	Attachment A
§270.14(b)(11)(ii)(A)	No fault within 3,000 feet (ft) with displacement in Holocene time	Attachment A
§270.14(b)(11)(ii)(B)	If faults which have displacement in Holocene time are present within 3,000 ft, no faults pass within 200 ft of portions of the facility where treatment, storage, or disposal will be conducted	NA
§270.14(b)(11)(iii)	100-year floodplain standard	Attachment A ^a
§270.14(b)(11)(iv)(A-C)	Facilities located within the 100-year floodplain	NA
§270.14(b)(11)(v)	Compliance schedule for 264.18(b)	NA
§270.14(b)(12)	Personnel training program	Attachment D ^a
§270.14(b)(13)	Closure and post-closure plans	Attachments F.1, F.2, and F.3
§264, Subpart G	Closure and post-closure	Attachments F.1, F.2, and F.3
§264.178	Closure/containers	Attachment F.1
§264.197	Closure and post-closure care/tanks	Attachment F.2
§264.228	Surface impoundments	NA
§264.258	Waste piles	NA
§264.280	Land treatment	NA

See footnotes at end of table

Table 1-1 (continued)
Regulatory References and Corresponding Permit Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Permit Application
§264.310	Landfills	NA
§264.351	Incinerators	NA
§264.601	Closure/miscellaneous units	Attachment F.3
§264.603	Requirements by the Secretary	Attachment F.3
§270.14(b)(14)	Deed restrictions/post-closure notices (264.119)	Attachments F.1, F.2, and F.3
§270.14(b)(15)	Closure cost estimate (264.142)	Attachments F.1, F.2, and F.3
§270.14(b)(16)	Post-closure cost estimate (264.144)	Attachments F.1, F.2, and F.3
§270.14(b)(17)	Liability insurance (264.147)	Attachments F.1, F.2, and F.3
§270.14(b)(18)	Proof of financial coverage (264.149-150)	Attachments F.1, F.2, and F.3
§270.14(b)(19)	Topographic map requirements	Attachment A ^b
§270.14(b)(19)(i)	Map scale and date	Attachment A ^b
§270.14(b)(19)(ii)	100-year floodplain area	Attachment A ^b
§270.14(b)(19)(iii)	Surface waters	Attachment A
§270.14(b)(19)(iv)	Surrounding land uses	Attachment A
§270.14(b)(19)(v)	Wind rose	Attachment A
§270.14(b)(19)(vi)	Map orientation	Attachment A ^b
§270.14(b)(19)(vii)	Legal boundaries	Attachment A ^b

See footnotes at end of table.

Table 1-1 (continued)
Regulatory References and Corresponding Permit Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Permit Application
§270.14(b)(19)(viii)	Access control	Attachment A
§270.14(b)(19)(ix)	Wells	Attachment A
§270.14(b)(19)(x)	Buildings	Attachment A
§270.14(b)(19)(xi)	Drainage barriers or flood control	Attachment A
§270.14(b)(19)(xii)	Location of operational units	Attachment A
§270.3(b)(20)	Other federal laws	3.0 ^a
§270.3(a)	Wild and Scenic Rivers Act	3.0 ^a
§270.3(b)	National Historic Preservation Act	3.0 ^a
§270.3(c)	Endangered Species Act	3.0 ^a
§270.3(d)	Coastal Zone Management	3.0 ^a
§270.3(e)	Fish and Wildlife Coordination Act	3.0 ^a
§270.3(f)	Executive Orders	3.0 ^a
§270.14(b)(21)	Notice of extension approval for land disposal facilities	NA
§270.14(c)	Groundwater monitoring requirements	Attachment A ^a
§270.14(c)(3)	Topographic map with points of compliance	NA
§270.14(c)(3)	Proposed location of groundwater monitoring wells	NA
§270.14(c)(4)	Description of plume of contamination that has entered the groundwater from a regulated unit at the time the application was submitted	NA
§270.14(c)(4)(i)	Extent of plume indicated on topographic map	NA
§270.14(c)(4)(ii)	Identification of constituents and concentration	NA
§270.14(c)(5)	Detailed plan and engineering report describing proposed groundwater monitoring program	

See footnotes at end of table.

Table 1-1 (continued)
Regulatory References and Corresponding Permit Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Permit Application
§270.14(c)(6)	If no release detected at date of submitted, then submit following	
§270.14(c)(6)(i)	List of proposed indicator parameters, waste constituents, and reaction products	NA
§270.14(c)(16)(ii)	Proposed groundwater monitoring system	NA
§270.14(c)(16)(iii)	Background values for each proposed monitoring parameter	NA
§270.14(c)(16)(iv)	Description of proposed sampling, analysis, and statistic comparisons to be used	NA
§270.14(c)(7)	If a release is detected at the point of compliance, then corrective actions	NA
§270.14(d)	Information requirements for solid waste management units (SWMU)	4.0
§270.14(d)(1)(i)	Location of SWMUs on topographic map	4.0
§270.14(d)(1)(ii)	Types of SWMUs	4.0
§270.14(d)(1)(iii)	Dimensions and descriptions of SWMUs	4.0
§270.14(d)(1)(iv)	Dates of SWMU operations	4.0
§270.14(d)(1)(v)	Waste types managed at SWMUs	4.0
§270.14(d)(2)	Information on releases from SWMUs	4.0
§270.14(d)(3)	RCRA Facility Assessment sampling and analysis results	NA
§270.15	Information requirements for containers	Attachment G
§270.16	Information requirements for tank systems	Attachment H
§270.16(a)	Written assessment of tank, structural integrity and suitability submitted by an independent, certified, registered professional engineer	Attachment H

See footnotes at end of table.

Table 1-1 (continued)
Regulatory References and Corresponding Permit Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Permit Application
§270.16(b)	Dimensions and capacity of each tank	Attachment H
§270.16(c)	Feed system description	Attachment H
§270.16(d)	Piping diagram	Attachment H
§270.16(e)	External corrosion protection description	Attachment H
§270.16(f)	New tank installation	NA
§270.16(g)	Detailed description of secondary containment	Attachment H
§270.16(h)	Request for variance	Attachment H
§270.16(i)	Description of procedures and controls to prevent spills and overflows	Attachment H
§270.23	Information requirements for miscellaneous units	Attachment I

- a Requirement or information is also addressed in the most recent version of the "Los Alamos National Laboratory General Part B Permit Application," as appropriate.
- b Some of the topographic map requirements are addressed in the most recent version of the "Los Alamos National Laboratory General Part A Permit Application," as appropriate.

ft = feet

NA = not applicable

SWMU = Solid Waste Management Unit